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Physics Procedia 24 (2012) 1214 – 1220

Physics
Procedia

2012 International Conference on Applied Physics and Industrial Engineering

Systematic Analysis on the Environment of Innovative Small and Medium Enterprises

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Abstract

Environment has great influence on the growth of Innovative SMEs (small and medium enterprises), and such enterprises have special requirements for their growth environment. The ecological factors of Innovative SMEs growth environment include policy and law, social culture, finance, science and technology, market, service, and nature, which get together with interactive and interrelated. Innovative SMEs depend on the environment; at the same time they react to the environment, so as to achieve sustained innovation and healthy growth in the process of interaction with the ecological environment.

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Keywords: innovative SMEs; growth environment; ecological factors

1. Introduction

Along with economic fluctuations, innovative SMEs (small and medium enterprises) become an important foundation for national economic growth and regional economic development, and will become an important force to support economic recovery and a new round of economic development. Thus giving birth to a large number of innovative SMEs and promoting their healthy growth is one essential way to boost SMEs development and upgrade national competitiveness. A good environment is essential for the healthy growth of these firms. Although there is much development of innovative SMEs, but compared with developed countries, the situation in China is not satisfactory. Lacking of good environment in favor of innovative SMEs healthy growth is an important aspect besides some problems in innovative SMEs themselves. As the innovative SMEs have their special features which are different from other SMEs, current theory research specializing in environmental issues on growth of innovative SMEs is still lacking.

This article will focus on environmental requirements of innovative SMEs growth, composition of environmental factors and their interaction mechanism according to research gaps.

2. Requirements of Innovative SMEs to Growth Environment

Currently there are many academic meaning on innovative enterprises, but there is still not universally accepted definition, while the definition of innovative SMEs is even little known. Combining with the characteristics of innovative enterprises and views of foreign scholars, this article defines the innovation SMEs that the new model enterprises take continuous innovation as the guiding ideology; create new value to obtain sustainable survival and development through ability and knowledge accumulation, application of corporate and social resources. Innovative SMEs growth is the development process from small to large, from weak to strong through innovating. Innovation is the premise of existence and development of innovative SMEs and innovation accompanies the production, development and grandness of such enterprises.

Innovative SMEs growth Environment is the general term for all the external conditions including policy, law, culture, finance, market and other factors that change with innovation and growth of Innovative SMEs, at the same time affect or restrict the growth. All the factors constitute an organic integrity based on intertwined, interaction and mutual restraint. Innovative SMEs have special requirements on the growth environment embodied in the following aspects:

2.1 Strong Policy-oriented

Innovative SMEs get protection and support from a lot of national preferential policies in the growth process. On the one hand, because of characteristics of small and medium enterprises it can enjoy the national finance and financial preferential policies and measures; on the other hand, since its innovative feature, such enterprises are subject to encouragement and guidance of the industrial policy that Government implements. The introduction of these policies will have a major impact on the growth and production activities of innovative SMEs, such as protection, coordination and guidance, and they are important guarantee for the innovation and healthy growth of innovative SMEs.

2.2 Cultural Environment is very Important

It is difficult to be identified and found because of the cultural environment influence on the innovative SMEs is subtle, but the effect is enormous and far-reaching. It will affect people's values, lifestyles and habits, thereby affecting people's consumption patterns and product preferences. How to seize, manage these cultural environment factors, and apply to product development and innovation is very important. At the same time, innovative SMEs is different from general SMEs, its growth was accompanied by continuous innovation, so a good cultural atmosphere for innovation is crucial[1]. Pursuit of novelty, advocate science and focus on the traditional values would produce different effects on the people's aesthetics and grade, thereby affecting of creative thought and behavior of innovative SMEs.

2.3 Heavy Dependence on Technological Environment

Technology innovation is the key to survival and development in a variety of innovative activities of Innovative SMEs. Relative to the cultural environment, the impact of technological environment is obvious, and technological innovation brought opportunities and challenges for innovative SMEs. Innovative SMEs win the market competition space for the development and enhance the core competitiveness just through the constant creation of innovative products rely on technological innovation.

An enterprise lack of new technology will not be able to create competitive products, thus resulting in loss of growth momentum.

2.4 Financing Environmental Impact Is Outstanding

Financing is an important issue of innovative SMEs facing in growth. Innovation means constant challenges and risks, and thus innovative SMEs are with high risk, low anti-crisis, and poor stability, which is different from the general financial characteristics of SMEs and large enterprises. Especially in the early growth stages, due to its own disadvantage, innovative SMEs are weak in obtaining credit guarantee and difficult to obtain sufficient funds needed for development. The different channels and ways of financing of various countries and regions will have different effects on the growth of innovative SMEs [2]. The more perfect capital markets, more financing channels, greater access to financial resources, the more favorable to innovative SMEs' growth and innovation.

2.5 Market Environmental Impact Is Great

The value of a new technology or product eventually needs to be manifested through the market. Market demand is the basis and driving force for innovation, and it is also the platform for enterprise value realization. Changes in market demand have an important impact on innovative SMEs growth, consumer income and consumption structure determines corporate innovation emphasis, the corporate innovation focus also transfer follow the consumer conditions. In addition, the intensity of market competition will have a huge impact on innovation activities, and the more intense, the more it can stimulate innovative behavior.

3. The Ecological Factors of Innovative SMEs Growth Environment

In ecology, the various elements constitute environment are called environmental factors. All the factors that have a direct or indirect impact of biological growth, development, reproduction, behavior and distribution are known as the ecological factors, the combined effect of all ecological factors constitute the biological environment [3]. Compared With the general concept of corporate growth environment, the concept of ecological environment of business growth has more emphasis on combined effects of various factors, as well as the interaction and mutual restraint between the factors. In this paper, the ecological factors of innovative SMEs growth environment are divided into seven areas: policy and law, social culture, finance, science and technology, market, service, and nature. Innovative SMEs and the growth environment constitute an ecosystem. Therefore, these ecological factors are interactive and interrelated, so we should look on in relation, rather than isolation.

3.1 Policy and Legal Ecological Factor

Policy and legal ecological factor means the collection of policies and laws formulated by Government or relevant department that impact of the growth of innovative SMEs, including national and local preferential support policies and related laws involving innovative SMEs. Both the extent of implementation and integrity of policy and the level of enforcement of law play an important role on the growth of innovative SMEs. Sound policy and legal environment provide the basis and strong guarantee for other environment creating, and other related environmental factors also influence the development and implementation of policies and laws.

3.2 Social and Cultural Ecological Factor

Social and cultural ecological factor means the collection of society and culture that influence the growth of innovative SMEs, including cultural traditions, religious beliefs, customs, values, ethics, language, social structure and so on [4]. Social and cultural environment is an important component of the innovative SMEs growth environment; it determines the innovative behaviors and growth methods at a certain time and space condition. The realization process of innovative SMEs from the innovation activities to innovative products, and ultimately translate into business value, not only depends on its own organization, technological innovation and reformation, more relies on the social and cultural elements that conducive to innovation.

3.3 Financing Ecological Factor

The innovative SMEs must have a good financing environment if they want to obtain the necessary development funds. Financing ecological factor means collection of financing channels and structure, the property trading market, the security system that affect the access to funds needed for innovative SMEs development. The quantity of financing channels and rationality of financing structure are the most direct indicators reflect the degree of financing environmental conditions. Companies can directly obtain the needed funds through property rights trading; credit guarantee system helps them to obtain the necessary funds indirectly through service.

3.4 Science and Technology Ecological Factor

The development of innovative SMEs is built on the basis of technological innovation, good science and technology environment can provide strong support for enterprises. Scientific and technological elements determine the innovative content and development direction. This factor includes the level of scientific research institutions, the situation of scientific researchers, R&D investment, technological exchanges and cooperation. The level of scientific research institutions is mainly reflected by the number and ability of universities, research institutes, enterprises and other research institutions. The researchers' status is including the quantity, quality and structural proportion which reflect the human resource base. The technological exchanges and cooperation during enterprises, universities, and research institutes are important channels for technology promotion and transfer.

3.5 Market Ecological Factor

Market ecological factor includes the market entry barriers, total market demand, market preference for innovative products, as well as the intensity and fairness of market competition. Market entry barriers reflect the size of adverse factors and constraints that company encountered when innovative products enter market, usually free market can win more opportunities for innovative SMEs. The total amount of demand and income levels of consumers reflects the size of market capacity. Market Preference for innovative products reflects promotion and guidance of the market to technology innovation and new product development. The more active and fair for market competition, the easier to stimulate innovative ideas and behavior, and the more favorable for the effective market competition and increase competitiveness.

3.6 Service Ecological Factor

Service ecological factor includes agent services, management consulting services, information consulting services, education and training services, etc. [5]. Innovative SMEs has endured from a wide range of uncertainty and risk in the innovation process, and are more vulnerable because of funding, technology, personnel, information, management and other various restrict factors compared to large enterprises and other SMEs, therefore they largely need to reduce risks and growth pressures through intermediary services, so as to improve the management level to enable them to be better engaged in the innovation activities , give full play to growth potential, and increase overall competitiveness.

3.7 Natural Ecological Factor

Natural ecological factor is composed by the time and space resources, natural resources, infrastructure, etc. [5]. Effectively using of time and space resources is beneficial to enhance the competitiveness of enterprises. Natural resources is the fundamental conditions for any enterprise's survival and development including minerals, water and soil, biology, environment, climate, energy, etc. Transportation and other public service infrastructure is the basis of enterprise engaging in production and operation. These natural factors will have an effect on innovation and business activities; even play a decisive role on the survival and development. Innovative SMEs should effectively use a variety of natural factors to avoid the threat and take full advantage of the opportunities in order to realize sustainable healthy growth.

These seven aspects are an interrelated and interactional entity; each factor's change will drive changes in other factors. Innovative SMEs exist in the complex environment; all of seven factors affect innovative SMEs in survival and development. These factors play an irreplaceable comprehensive role in the enterprise and there exists interaction in the various ecological factors. As interrelated in light to temperature, temperature to humidity, when policy and law impact on individual SMEs, it will surely affect the financing environment, market environment and other aspects, and then the market would also affect the technical environment.

4. Interaction of Innovative SMEs and Growth Environment

4.1 Environment Impact and Dominate on the Growth of Innovative SMEs

Environment's impact on the growth of innovative SMEs is comprehensive and sustained, and in most cases is not reversible, it dominates the whole process of business growth in all aspects. Various environmental factors have different impacts on the growth of innovative SMEs, both positively and negatively. On the one hand, a variety of environmental factor provide hardware and software support for enterprise growth; on the other hand, they restrict the growth of enterprises at a specific time and space. Complex environment bring opportunities and challenges for innovative SMEs, and the specific effect depends on the type and characteristics of environmental factors as well as interlink between unique properties of internal elements.

4.2 Innovative SMEs Adapt and Feedback to the Environment

In an increasingly competitive era of economic globalization, enterprises are facing unprecedented uncertainty, rapidly changing environment, so adapting is the key to the existence and development for innovative SMEs. So such enterprises should also take the initiative to adapt and modify the environment along with the passive environmental influence [6]. Innovative SMEs should not only play their own

flexibility, enhance the adaptability to environmental change by adjusting the own system elements, but also use their own resources and advantages dynamically influence on the environment through a series of innovative behavior, thus changing some of the environmental factors to achieve sustainable growth.

4.3 Innovative SMEs and Environmental Interact

As an open system, Enterprise constantly engaged in material, information and energy exchange with environment [7]. Therefore, the growth of any business enterprise can be seen as the result of interaction with the environment. Innovative SMEs is growing and evolving under the influence of various environmental factors and reaction upon the environment. The interaction process is reflected as environmental factors affect every elements and the relationship between them within the business system embodied in ideas, innovative behavior-based, and the enterprise changes with its impact on the environmental factor and their relations to create more innovative opportunities and favorable development space. The cultural environment, for example, if the regional people have the spirit of adventure and innovation, and generally are positive in innovation activities, this attitude is one driving force behind innovation. In this atmosphere the enterprise will generate strong market insight to find the potential market demand, and result in innovative start-ups and other strong desire, which in turn strengthen the cultural atmosphere of innovation, the formation of virtuous cycle will maintain continuity of innovation and growth.

5. Conclusion

Enterprise is from the environment, dependent on the environment, but it is also independent of the environment and reacts to it [7]. Innovative SMEs interact with the environment to realize their own change and evolution. There is a problem of matching, and this is just the two-way guide mechanism that environment select enterprise which feedback to the environment. Innovation brings opportunities for existence and development of innovative SMEs, but also risks and threats. Survival of the fittest, innovative SMEs realize development and growth through interaction with the environment constantly and the poor eliminated by the market, the interaction also comes to an end.

Acknowledgment

The finance supported by the Fundamental Research Funds for the Central Universities is acknowledged. This work was developed within the project ‘The Research on Competitiveness Ascension Path of Innovative Industry Enterprises in Heilongjiang Province’ (Fund No.: 08D002). This paper was also developed from the ‘Soft science and technology research projects in Harbin’ (Fund No.: 2009AC9CT099).

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